AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A magnetic body composed of non-magnetic material, comprising:

quantum dots, each of which has at least one electron to form a localized spin;

a barrier potential region having a higher energy than a Fermi energy of an electron in the respective quantum dots and confining the at least one electron within the respective quantum dots; and

a conductive electron region including a conductive electron system having an energy lower than an energy of the barrier potential region,

wherein the respective quantum dots are disposed separate from one another via the barrier potential region and the conductive electron region to show ferromagnetism based on an interaction between localized spins through the conductive electron region,

wherein the quantum dots are spatially arranged permitting a size fluctuation in a range that satisfies a condition in which a center-to-center distance between nearest quantum dots is greater than a size of the respective quantum dots along a confinement direction ~~of~~ containing the at least one electron and at most $1/\pi$ times a Fermi wave length of a conductive electron of the conductive electron region.

2. (Canceled)

3. (Canceled)

4. (Previously Presented) The magnetic body according to claim 1, wherein the respective quantum dots are arranged in a three-dimension such that the Fermi wave length of the conductive electron is at most approximately 50 nm.

5. (Previously Presented) The magnetic body according to claim 1, wherein the respective quantum dots are arranged in a three-dimension such that the center-to-center distance between nearest quantum dots is at most approximately 4 nm, whereby the magnetic body shows ferromagnetism at a room temperature.

6. (Previously Presented) The magnetic body according to claim 1, wherein the respective quantum dots are arranged in a two-dimension such that the Fermi wave length of the conductive electron is at most approximately 300 nm.

7. (Previously Presented) The magnetic body according to claim 1, wherein the respective quantum dots are arranged in a two-dimension such that the center-to-center distance between nearest quantum dots is at most approximately 10 nm, whereby the magnetic body shows ferromagnetism at a room temperature.

8. (Currently Amended) The magnetic body according to claim 1, wherein the respective quantum dots permit a size fluctuation in a range that the size of the respective quantum dots along the confinement direction ~~of~~ containing the at least one electron less than $1/\pi$ times the Fermi wave length of the conductive electron.

9. (Canceled)

10. (Withdrawn) The magnetic body according to claim 1, wherein the respective localized electron regions and the barrier potential region are formed by an electrostatic

potential in the two-dimensional conductive electron region at an interface between a semiconductor and an insulation layer when a given voltage is applied to an external gate electrode formed on the insulation layer.

11. (Withdrawn) The magnetic body according to claim 1, wherein the respective localized electron regions are formed by permitting electrons to be trapped in a quantum wire structure.

12. (Previously Presented) The magnetic body according to claim 1, wherein the respective quantum dots are composed of one of a semiconductor cluster, a semiconductor cluster, a carbon cluster and a metallic cluster as the non-magnetic material.

13. (Currently Amended) A magnetic device comprising:

a magnetic body including:

quantum dots, each of which has at least one electron to form a localized spin;

a barrier potential region having a higher energy than a Fermi energy of an electron in the respective quantum dots and confining an electron within the respective quantum dots; and

a conductive electron region including a conductive electron system having an energy lower than an energy of the barrier potential region, wherein the respective quantum dots are disposed separate from one another via the barrier potential region and the conductive electron region to show ferromagnetism based on an interaction between localized spins through the conductive electron region, wherein the quantum dots are spatially arranged permitting a size fluctuation in a range that satisfies a condition in which a center-to-center distance between nearest quantum dots is greater than a size of the respective quantum dots along a confinement direction ~~of~~ containing the at least one electron and at most $1/\pi$ times a Fermi wave length of a conductive electron of the conductive electron region;

an insulation layer; and

a gate electrode disposed in close proximity to a conductive electron region of the magnetic body through the insulation layer;

wherein application of a voltage to the gate electrode allows a ferromagnetic condition of the magnetic body to be controllably turned on or turned off.

14. (Withdrawn) A method of manufacturing a magnetic body formed of non-magnetic material, the method comprising:

growing semiconductor material on a conductive electron region through a barrier potential layer in a self-organizing capability such that a center-to-center distance between the nearest quantum dots is at most $1/\pi$ times a Fermi wave length of a conductive electron.